

GAO

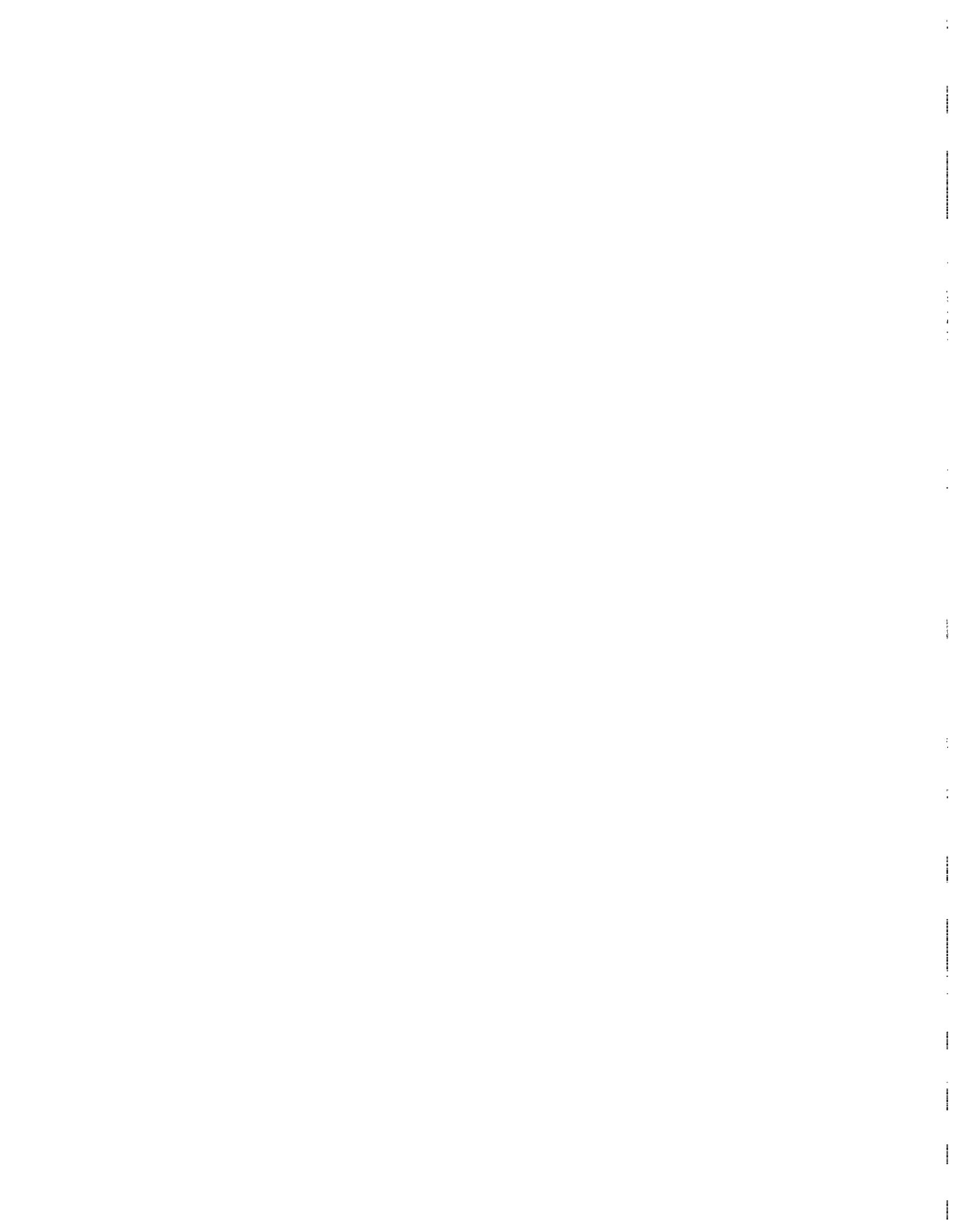
Report to the Honorable
Dave Durenberger, U.S. Senate

May 1994

MILITARY TRAINING DEATHS

Need to Ensure That Safety Lessons Are Learned and Implemented







United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-255834

May 5, 1994

The Honorable Dave Durenberger
United States Senate

Dear Senator Durenberger:

During peacetime, the military services train their personnel on an ongoing basis in formal schools to develop their individual skills and in unit operational exercises to maintain war-fighting readiness. Due to the combat missions of the military services, some of the training includes phases and activities that pose risks to the safety of both trainers and trainees and military personnel sometimes lose their lives in training mishaps.

We previously reported to you the numbers and types of fatalities resulting from mishaps involving military training activities during fiscal years 1988 to 1991.¹ At your request, we focused our present effort on determining whether (1) all training-related deaths are being identified and investigated, (2) the services' regulations and procedures provide adequate independence of investigations, and (3) the services have systems in place to ensure that corrective action is taken where appropriate. We did not attempt to assess the quality of the specific investigations. We also updated our information to include fiscal year 1992 cases.

Background

In fiscal years 1989 through 1992, at least 700 uniformed personnel lost their lives in accidents while engaged in training activities such as swimming, parachuting, weapons training, and physical fitness exercises. The services consider deaths that occur during training activities as "Class A"² accidents, which they classify as either aviation or non-aviation³ mishaps. The Department of Defense (DOD) requires the military services to investigate such fatal training mishaps by conducting both a safety investigation (to identify the causes and to help prevent recurrence) and a separate legal investigation (primarily for use in litigation, claims, and disciplinary or adverse administrative actions).

¹Military Training: DOD Training Fatalities for Fiscal Years 1988 to 1991 (GAO/NSIAD-92-213FS, July 22, 1992).

²Class A mishaps are those where the cost of the reported damage is at least \$1 million; an aircraft, missile, or spacecraft is destroyed; or an injury and/or occupational illness results in a fatality or permanent disability.

³The military services define "non-aviation" mishaps as those which occur on the ground and do not directly involve damage or destruction of aircraft or other specified items.

We reviewed the safety and legal investigation files of a non-projectable sample of 37 of the over 400 training fatality mishaps that occurred in fiscal years 1989 to 1992. These 37 mishaps—19 aviation and 18 non-aviation—involved 61 deaths. A more detailed description of our case selection process appears in the scope and methodology section of this report.

Results in Brief

The military is not doing enough to ensure that safety lessons from training-related deaths are learned and implemented. The services have not investigated all training-related deaths because (1) they have characterized some training-related fatalities as attributable to natural causes, even when training may have been a contributing factor, and (2) even where natural causes are not a factor, they have not always conducted both safety and legal investigations of fatal aviation and non-aviation training mishaps.

Controls to ensure the credibility of safety investigations and the implementation of resulting recommendations generally appear to be adequate. However, weaknesses exist in the services' internal controls for conducting legal investigations of fatal training mishaps, thereby increasing the risk of biased investigations and ineffective recommendation resolution. Current legal investigative procedures do not ensure that (1) the officials who appoint the investigators and the investigators themselves are independent of the unit that experienced the mishap or (2) report recommendations are monitored until resolution.

Investigating Fatalities

Service regulations require each of the military services to conduct a safety investigation of serious mishaps in order to improve safety and reduce the risks of property damage, injuries, and deaths. In addition, each service conducts other investigations to determine whether mishap deaths resulted from negligent or criminal activities.

Each of the services has a central safety center⁴ that establishes and implements safety policies. These safety centers monitor and review investigation reports on fatal and other serious mishaps. They also follow up on report recommendations to ensure that they are implemented. In addition, the safety units enter relevant information from the reports into

⁴These units are the Army Safety Center, Air Force Safety Agency, Naval Safety Center, and Marine Corps Safety Office. The Marine Corps Safety Office monitors only those investigations involving mishaps on the ground. The Naval Safety Center monitors investigations into Marine Corps aviation mishaps.

their data banks to use in trend analysis for identifying safety hazards and providing safety statistics.

Safety investigations result in one of two types of reports—limited use and general use reports. Limited use reports are restricted, internal reports done for the sole purpose of preventing subsequent mishaps. This type of report is required on all aviation mishaps and is authorized for use in certain other mishaps. Witnesses may be given a promise of confidentiality that protects them from having the information they provide used against them for disciplinary purposes. If a pledge of confidentiality is given, DOD will resist efforts to require disclosure of the information under the Freedom of Information Act.

General use reports, on the other hand, are prepared on all reportable mishaps not covered by a limited use report. Although the primary purpose of this type of report is to prevent future mishaps, its use for other purposes for reasons of economy is not specifically prohibited. Witnesses may be promised that their statements will not be used against them for disciplinary purposes, but no promises are made regarding exemption from Freedom of Information Act requests.

The primary purpose of a legal investigation is to determine the facts of the accident and to obtain and preserve available evidence for claims, litigation, and disciplinary and administrative actions. Each of the services, with the exception of the Air Force, makes recommendations in their legal investigation reports that are often aimed at improving training safety. For example, we examined a case in which a Marine was shot and killed during a live-fire exercise. The legal investigation concluded that the accidental shooting of the Marine would have been avoidable had personnel of the training unit followed the safety procedures called for in specific service regulations. It recommended that Marine Corps orders and guidelines be clarified and revised to include specific requirements to improve safety during live-fire exercises.

Lastly, according to service officials, criminal investigations are conducted on all noncombat and non-aviation deaths that are considered “medically unattended”⁵ to determine if any criminal misconduct was involved. These investigation reports do not contain any recommendations.

⁵Service officials defined a medically unattended death as a death that occurs outside a hospital or without a physician in attendance.

Required Investigations of Training-Related Deaths Not Always Performed

The military services did not perform all required investigations of all training-related fatal mishaps. Specifically, the services classified a number of deaths as being due to natural causes unrelated to the work environment, even though the deaths occurred during or shortly after physical conditioning training. Also, the Navy, Marine Corps, and Air Force did not comply with DOD's policy requiring both safety and legal investigations of all fatal non-aviation training mishaps. In addition, the Army was unable to provide evidence that legal investigations were performed on some of the aviation and non-aviation mishap fatalities in our sample.

Services Do Not Identify and Investigate All Training-Related Deaths

DOD and the services classify the deaths of service members in a number of categories, such as hostile action, accident, and so forth. Only the Marine Corps has a "training-related death" category, and it did not include all deaths we consider to be training-related. Therefore, we manually reviewed data obtained from DOD and the services' casualty offices and safety centers to identify training-related incidents. With basic agreement from the Army and the Navy surgeons general,⁶ we developed and used the following definition for "training-related" circumstances to extract information from the various databases:

A training-related death is one that results from a peacetime military exercise or training activity that is designed to develop a military member's physical ability, maintain or increase individual or collective tactical skills, or maintain or increase a member's proficiency in a specific activity or environment. This includes deaths that occur after the training event but where the exercise or activity could be a contributing factor.

Our analysis revealed that six deaths categorized by the services as resulting from natural causes occurred under circumstances that could be related to training activities. These were primarily cardiac arrests that occurred during or shortly after the service members had performed required physical training exercises. A typical example of these was a Marine who died from cardiac arrest after completing a required physical fitness regimen. Although he had just completed 5 pull-ups, 80 sit-ups, and a 3-mile run, his death was not considered to be a training death, but rather was classified as a natural cause death.

DOD Instruction 6055.7, governing mishap investigation and reporting, does not require deaths from "natural causes unrelated to the work

⁶The Air Force Surgeon General's office did not concur with the GAO-developed definition, but did agree with the goal of developing such a definition.

environment" (emphasis added) to be investigated as a mishap. Since the services are classifying these deaths as being due to natural causes rather than training, they are not investigating them and, consequently, are unable to make a definitive determination regarding the impact of the work environment on the death.

Officials in both the Army and the Navy surgeons general offices said they believe that cardiac arrest cases should be treated as mishaps and investigated to determine whether physical training was a contributing cause. This could allow the safety centers to identify and monitor potentially dangerous physical training practices and procedures so they can take appropriate actions where necessary. Also, the Marine Corps essentially adopted this policy in its 1993 version of its safety investigation regulation.⁷

An example in our 1989 review of Navy training safety illustrates how lessons learned from apparent natural cause deaths can be used to improve safety.⁸ We found that the Navy had identified a number of cases of heat exhaustion deaths that were complicated by the sickle-cell trait. Navy officials told us that recognition of the sickle-cell trait as an increased risk factor in heat injuries led them to improve safety by routinely testing sailors for the sickle-cell trait and requiring those who possessed the trait to wear identifying armbands during physical fitness training so that their condition could be monitored more closely.

Required Safety and Legal Investigations of Fatal Aviation and Non-Aviation Training Mishaps Not Always Conducted

Although required by DOD, the services had not conducted safety and legal investigations of all 37 mishaps in our sample. Aside from not conducting safety investigations of any of the 6 deaths attributed to natural causes, the services had conducted safety investigations of only 9 of the other 12 fatal non-aviation training mishaps we reviewed. The Army and the Air Force conducted safety investigations on all such mishaps—six Army and three Air Force. The three mishaps for which no safety investigations were conducted involved

- a Marine who was shot while training to maneuver with support fire from a rifle squad,
- a Marine who was left out in the desert following a field exercise, and
- a sailor who drowned in a pond during Emergency Service Team training.

⁷Marine Corps Order P5102.1, "Marine Corps Ground Mishap Reporting," March 3, 1993.

⁸Navy Training: Safety Has Been Improved, but More Still Needs to Be Done (GAO/NSIAD-89-119, Mar. 7, 1989).

At the time the mishaps we reviewed occurred, Marine Corps regulations did not incorporate the DOD requirement that safety investigations be conducted for all fatal non-aviation training mishaps. The Marine Corps has since revised its regulations to require investigations of such mishaps. Although Navy regulations required safety investigations of non-aviation deaths, Navy officials acknowledged that they had not always been conducting these investigations. However, Navy officials told us that they are now enforcing the requirement and that all future non-aviation deaths should be subject to a safety investigation.

Additionally, the services were not conducting legal investigations of all aviation and non-aviation training fatalities at the time of our review. The services had conducted legal investigations of only 8 of the 12 non-aviation mishaps in our sample that were not attributed to natural causes. Three of the four non-aviation mishaps that did not receive legal investigations were from the Air Force, and one was from the Army. The Air Force mishaps involved

- an Air National Guard driver who fell out of his vehicle and was run over during a training exercise,
- an airman who was shot in the back of the head on an Army firing range during an Air Force training exercise, and
- an Air Force security policewoman who was fatally injured by a grenade during a live-fire training exercise.

The Army mishap involved a soldier who drowned when a boat unexpectedly entered the water due to failed truck brakes.

According to Air Force officials, they were not aware of DOD's requirement and had not incorporated it into their regulations.

Except for the Army, the services had conducted legal investigations on all the aviation mishaps in our sample. The Army did not have any record of whether legal investigations were conducted on some of its aviation training fatalities. Army legal officials said they did not know whether legal investigations were ever performed on these deaths since such investigations are performed and retained at the local installation level with no centralized reporting.

The Army was unable to produce legal investigation reports on three of its four aviation mishaps in our sample. All three mishaps involved the use of night vision goggles (NVG). The mishaps involved

- an OH-58 helicopter that hit a power line during NVG flight;
- a UH-1 helicopter in a NVG-related, mid-air collision; and
- an OH-58C helicopter that crashed during a low-level NVG training mission.

Army officials cited the fact that one of the training mishaps occurred in a combat zone (during Operation Desert Shield) as a possible reason it did not conduct a legal investigation. However, Army regulations governing legal investigations do not cite combat zone location as an exemption to the requirement to conduct a legal investigation.

Internal Controls in Investigative Processes

We identified minimal criteria that should be met to provide adequate assurance that the findings of the various investigations will be credible and useful in reducing the likelihood of future mishaps. The criteria we used to assess the investigative processes are (1) the existence of procedures to either ensure the independence of the convening authority and the senior investigative member from the unit that experienced the mishap or provide a reviewing authority outside the mishap unit's chain of command and (2) the existence of a system to monitor the implementation of recommendations.

Safety Investigation Controls Appear Adequate

With regard to safety investigations, service procedures generally provide reasonable assurance of credible investigations and effective tracking of recommendations.

In the Army and the Marine Corps, the commander of the unit in which the fatal mishap occurred initiates the safety investigation. In the Air Force, the commander of the Numbered Air Force or major command to which the mishap unit belongs initiates the safety investigation. In the Navy, safety investigations are initiated by standing aircraft mishap boards (for aviation-related mishaps) or by the immediate superior of the mishap unit commander (for non-aviation fatalities). In each of the services, depending upon the complexity of the mishap, an officer or board of officers may be appointed to conduct the investigation. A safety investigation board is generally headed by a senior officer and consists of at least one safety, investigative, and technical expert. The services' regulations require the investigating officer to submit a report upon the completion of the

investigation to the commander. A copy of the investigative report also goes to the service's central safety center. Although the convening authority and the senior investigative member are typically from the mishap unit, the independent review by the central safety center provides a reasonable check on the credibility of investigations.

With the exception of the Army Safety Center, central safety center personnel generally do not conduct safety investigations themselves. The Army Safety Center conducts investigations of major mishaps involving fatalities and extensive equipment damage. All of the services' safety centers may provide assistance to unit investigators as requested.

The safety centers in each service track the systemic recommendations made in safety investigations. The Army Safety Center, however, does not track unit-specific recommendations. According to Army Safety Center officials, they do not track unit level recommendations because doing so would exceed the center's scope of responsibility. Army Safety Center officials believe it is the responsibility of the unit and the major command to track unit level recommendations since those are the organizations affected.

Legal Investigation Controls Are Weak

The services do not have adequate procedures to ensure that legal investigations of training mishaps are not compromised by lack of independence and that recommendations are monitored until corrective action is complete. Our review of the 27 legal investigation reports that had been conducted revealed that in most of the cases the officials involved in the investigation were from the same unit that experienced the mishap. Also, there was no evidence that recommended corrective actions had been monitored until resolution.

The Services Do Not Have Procedures to Ensure the Independence of Legal Investigations

DOD Instruction 6055.7 recognizes that the independence of the investigators is important to ensuring that conclusions and recommendations will be impartial and credible. It requires that investigations be conducted by a "disinterested third party whenever possible." However, DOD and service regulations and procedures do not require that those who appoint investigators and those who conduct the investigations be independent of the unit being investigated. Also, there is no provision for a review authority from outside the mishap unit's chain of command.

Services Lack Systems to Track Recommendations Made in Legal Investigations

For the 27 legal investigation reports we reviewed, the appointing officials were independent of the unit under investigation in only 12 cases (44 percent) and the investigators were from independent organizations in only 11 cases (41 percent). In one of the cases we reviewed, the Marine Corps Commandant concluded that “when a Marine is killed or injured while training, . . . it should . . . be obvious that the investigating officer cannot be a member of the organization being investigated nor should he be appointed by its commander.” As a result, the Marine Corps conducted a second investigation.

Despite DOD’s requirement that the services establish a system to identify problem areas and ensure that corrective actions are monitored until completion, none of the services has a system for capturing and monitoring recommendations made in legal investigation reports. The 18 legal investigation reports we reviewed made a total of 120 recommendations.¹⁰ Because there was no formal tracking procedure, we could not determine whether all of these report recommendations had been resolved. Examples of these recommendations are as follows:

- Army officials investigating the rollover of a motor vehicle recommended a safety policy that all tracked vehicle crews be proficient in rollover drills.
- Navy investigators who reviewed the premature detonation of a MK 344 fuse during a training bombing run recommended that the use of the fuse in live weapons be discontinued and that the fuse be used only for training purposes in inert weapons.
- Marine investigators who reviewed the death of an officer who was killed when the AV-8B aircraft he was flying crashed recommended that nighttime visual illusions be discussed at the next safety review.

According to service officials, individual command units that experience training mishaps are responsible for ensuring that recommended corrective actions are acted upon. We attempted to contact officials at some of the units responsible for the investigations to determine the status of the corrective actions. However, in most cases, the officials directly involved with the mishap investigations had since left the units, and remaining officials told us they had no formal procedure for either implementing or monitoring corrective actions identified in legal investigation reports. Furthermore, none of the units maintained records of whether appropriate actions were taken as a result of the investigative recommendations.

¹⁰This does not include the nine legal investigations conducted by the Air Force because its legal investigation reports do not contain any recommendations.

Recommendations

We recommend that the Secretary of Defense

- formally define what constitutes a "training-related" death and include in that definition deaths due to natural causes that occur during or shortly after a training activity;
- direct the services to amend their regulations to include the common definition for training-related death and require that all training-related deaths be investigated;
- direct the services to enforce DOD's requirement to conduct safety and legal investigations on all training-related deaths, both aviation and non-aviation;
- direct the services to ensure the independence of legal investigations by requiring that (1) the convening authority come from a higher level than the unit that experienced the mishap and (2) the senior investigative member also be independent of that unit; and
- direct the services to establish systems to track safety recommendations made in legal investigative reports to ensure that appropriate actions have been taken.

Agency Comments and Our Evaluation

DOD reviewed a draft of this report and provided official comments, the full text of which appears in appendix I. DOD concurred that some training fatalities that appeared to be the result of natural causes should be treated as accidents and investigated. DOD stated that it would create a definition of "training-related" death and include that definition in its update of DOD Instruction 6055.7, "Mishap Investigation, Reporting, and Recordkeeping," which is scheduled for issuance by the end of 1994.

DOD disagreed with our conclusion that the services had not investigated all training-related deaths. DOD pointed out that the deaths that received neither a safety nor a legal investigation were classified by the services as "natural cause" deaths requiring no investigation. However, the regulation does not exempt all natural cause deaths from the investigation requirement, but only deaths from "natural causes unrelated to the work environment." We believe that where death occurs during or shortly after physical training, the services can not make a definitive determination ruling out a relationship to the work environment without initiating an investigation. The Army and the Navy surgeons general agreed that cardiac arrest deaths occurring during or shortly after a training activity should be investigated to determine whether physical training was a contributing cause.

DOD disagreed with our recommendation aimed at ensuring the independence of legal investigations. DOD stated that it believes its requirement for a “disinterested third party” and the review and approval processes the services use ensure adequate independence. Since the commander of a unit that experienced a mishap would have a natural interest in avoiding blame, we continue to believe that an investigation conducted by a person reporting to the commander of that unit would create at least the appearance of a conflict of interest and the credibility of the findings would be open to question.

DOD acknowledged that at the time of our review, some legal investigations were used as a substitute for safety investigations, but stated that this practice no longer occurs. DOD also indicated that it believed we were misinterpreting the requirement for a legal investigation as requiring a specific type of legal mishap investigation that includes safety recommendations. It said it uses the term “legal investigation” somewhat generically to describe actions taken to obtain and preserve available evidence for use in litigation, claims, disciplinary action, or adverse administrative actions.

We have not taken the position that it is the role of legal investigations to make safety recommendations. However, we believe that if the legal investigation report does make safety recommendations, such recommendations should be monitored until they are resolved. It is possible that the legal investigation might identify something that was overlooked by the safety investigation. For example, one of the mishaps in our sample involved the crash of a Marine Corps helicopter during a night training mission at sea. Although the safety investigation report made no recommendations, the legal investigation report did make some safety-related recommendations. It recommended that (1) the standard operating procedures for shipboard operations concerning aircraft lighting be modified to require anti-collision lights be turned on prior to take-off and (2) that both voice and visual recording systems (Pilot Landing Aid Television system and tower voice recorders) be installed on all large amphibious (air capable) vessels. We believe that the services have an obligation to seriously consider safety-related recommendations made in legal investigations and track them until they have been resolved.

Scope and Methodology

With the basic concurrence of the Army and the Navy surgeons general, we developed a definition of what constitutes a training-related death. We used that definition to identify the number and types of active duty

training fatalities that occurred during fiscal years 1989 to 1992 from data provided by DOD's Directorate for Information Operations and Reports and the military services' casualty offices and safety centers. We did not verify the accuracy of this data.

We focused our review primarily on the services' legal and safety investigations. To evaluate the investigative processes, we reviewed DOD and service regulations on legal and safety investigations, and we interviewed responsible officials in each of the service safety centers and investigative headquarters. We analyzed the investigations that were performed on 37 of over 400 training fatality mishaps that occurred from fiscal years 1989 to 1992. Specifically, we determined whether

- they were done according to established criteria,
- the investigations were sufficiently independent from the mishap unit to produce credible results, and
- the investigation reports contained recommendations to improve training safety and whether such recommendations were implemented.

We did not attempt to assess the quality of specific investigations.

We divided our database of fatal training mishaps into aviation and non-aviation because about half the mishaps occurred in each of those areas. We then drew our sample from these two databases, randomly selecting one aviation and one non-aviation fatality from each service for each fiscal year from 1989 to 1992 with the exception of the Air Force, which reported only four non-aviation fatalities during this time period, three of which occurred in 1 fiscal year. We judgmentally selected another five mishaps, which included (1) the two cases that had triggered the request, (2) the other two Air Force non-aviation mishaps that occurred during the review period, and (3) one case that appeared similar to another mishap we were reviewing. The 37 mishaps accounted for a total of 61 fatalities.

We analyzed DOD and service regulations, policies, inspection and audit reports, data from casualty and safety center offices, and various materials associated with military training, mishap reporting, and death investigations. We also interviewed key officials of each of the services' training commands, legal investigation commands, safety organizations, criminal investigation commands, and surgeon general offices. We visited some training bases where we observed high-risk training in progress and interviewed training supervisors, instructors, and students.

We conducted our review from June 1992 to March 1994 in accordance with generally accepted government auditing standards.

We are sending copies of this report to responsible congressional committees, the Secretaries of Defense, the Army, the Navy, and the Air Force, and the Commandant of the Marine Corps. We will also make copies available to others upon request.

Please contact me at (202) 512-5140 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix II.

Sincerely yours,



Mark E. Gebicke
Director, Military Operations and
Capabilities Issues

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000



FEB 2 1994

Mr. Mark E. Gebicke
Director, Military Operations and
Capabilities Issues
National Security and
International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "MILITARY TRAINING DEATHS: Need to Ensure That Safety Lessons Are Learned and Implemented," dated December 17, 1993 (GAO Code 391188) OSD Case 9589. The Department partially concurs with the report.

The death of any Service member is a serious and troubling event. The Department tries very hard to prevent deaths--regardless of cause. Some deaths are due to accidents. Special processes have been developed to prevent accidental deaths--and, should they occur, to prevent their recurrence. Accident prevention is very important to the DoD. In a November 15, 1993, memorandum to the Department, Secretary Aspin reasserted that importance when he stated: "...I expect all commanders and managers to become personally involved in making their occupational illness and accident prevention programs more effective." It is important that the DoD continues its significant, long term, downward trend of military fatality rates.

The DoD agrees with the report premise that some training fatalities, which appear to be the result of "natural causes," should be treated as accidents and investigated. The DoD will create a definition of "training-related" death, and include that definition in its update of DoD Instruction 6055.7, "Mishap Investigation, Reporting, and Recordkeeping," which is scheduled for issuance by the end of 1994.

The DoD does not fully agree with the GAO interpretation of what constitutes a legal investigation. The GAO perceives the DoD as requiring a specific type of legal mishap investigation that includes recommendations. That is not correct. The DoD uses the term "legal investigation" somewhat

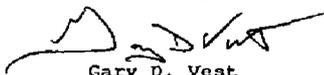
Environmental Security  Defending Our Future

Appendix I
Comments From the Department of Defense

generically to describe actions taken to "obtain[s] and preserve[s] all available evidence for use in litigation, claims, disciplinary action, or adverse administrative actions." At the time of the GAO review, some "legal" investigations were used as a substitute for safety investigations. That no longer occurs. Therefore, the DoD does not plan to reduce the flexibility provided for legal investigations by creating additional requirements.

The detailed DoD comments on the report findings and recommendations are enclosed. The Department appreciates the opportunity to comment on the draft report.

Sincerely,



Gary D. Vest
Principal Assistant Deputy Under Secretary
of Defense (Environmental Security)

Enclosure

Appendix I
Comments From the Department of Defense

GAO DRAFT REPORT - DATED DECEMBER 20, 1993
(GAO CODE 391188) OSD CASE 9589

"MILITARY TRAINING DEATHS: NEED TO ENSURE
THAT SAFETY LESSONS ARE LEARNED AND IMPLEMENTED"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

- o **FINDING A: Military Training Includes Phases and Activities That Pose Risks to Safety.** The GAO reported that, during peacetime, the Military Services train personnel on an ongoing basis (1) in formal schools to develop individual skills and (2) in unit operational exercises to maintain war-fighting readiness. The GAO pointed out that, due to the combat missions of the Services, some of the training includes phases and activities which pose risks to the safety of both trainers and trainees. The GAO emphasized that, as a result, military personnel sometimes lose their lives in training mishaps.

The GAO reported that, during the period FY 1989-FY 1992, at least 700 uniformed personnel lost their lives in accidents while engaged in training activities--such as swimming, parachuting, weapons training, and physical fitness exercises. The GAO explained the Services consider deaths that occur during training activities as "Class A" accidents--aviation or non-aviation mishaps. The GAO further explained that the DoD requires the Services to investigate such fatal training mishaps by conducting both a safety investigation (to identify the causes and to help prevent recurrence) and a separate legal investigation (primarily to affix responsibility). (pp. 1-2/GAO Draft Report)

DOD RESPONSE: Partially concur. The DoD considers deaths during training as Class A mishaps if they meet the definition of accidental. That currently excludes suicides, homicides, and those by natural causes. With regard to legal investigations, current DoD policy does not state that legal investigations are conducted "primarily to affix responsibility." Rather, DoD policy states that investigations are conducted for "legal considerations" and "to obtain and preserve all available evidence for use in litigation, claims, disciplinary action, or adverse administrative actions." Currently, a commander may choose to use the information in a legal mishap report, of whatever type, to affix responsibility, but that is discretionary.

Enclosure

Page 1 of 10

Now on p. 1.

See comment 1.

Appendix I
Comments From the Department of Defense

- o **FINDING B: The Military Services Have Procedures for Investigating Fatalities.** The GAO reported that each Service has a central safety center, which establishes and implements safety policies and monitors and investigates fatal mishaps in order to improve safety and reduce the risks of property damage, injuries, and deaths.
 - **Safety Investigations**--The GAO observed that the results of safety investigation reports are either limited use or general use reports. The GAO explained that limited use reports are close hold, internal reports done for the sole purpose of preventing subsequent mishaps and are required on all aviation mishaps. The GAO noted that witnesses may be given a promise of confidentiality and, if given, the DoD will resist efforts to require disclosure of the information under the Freedom of Information Act. The GAO explained that general use reports are prepared on all reportable mishaps not covered by a limited use report. The GAO observed that witnesses may be promised that their statements will not be used against them for disciplinary purpose, but no promises are made regarding exemption from Freedom of Information Act requests.
 - **Legal Investigation**--The GAO further reported that the primary purpose of a legal investigation is to determine the facts of the accident and to obtain and preserve available evidence for claims, litigation, and disciplinary and administrative actions. The GAO pointed out that each Service, with the exception of the Air Force, makes recommendations in their legal investigation reports--recommendations that are often aimed at improving training safety. The GAO cited the case in which a Marine was shot and killed during a live-fire exercise. They observed that the legal investigation concluded that the accidental shooting of the Marine would have been avoidable had personnel of the training unit followed the safety procedures called for in specific Service regulations. The GAO noted the investigative report recommended that Marine Corps orders and guidelines be revised to include clarification and specific requirements to improve safety during live-fire exercises.
 - **Criminal Investigation**--The GAO reported that, according to Service officials, criminal investigations are conducted on all noncombat and non-aviation deaths considered to be "medically unattended"--with the objective of determining whether any criminal misconduct was involved. The GAO noted, however, that criminal investigation reports do not contain any recommendations. (pp. 3-5/GAO Draft Report)

Now on pp. 2-3.

Page 2 of 10

DOD RESPONSE: Concur.

- o FINDING C: The Military Services Do Not Identify and Investigate All Training-Related Deaths. The GAO observed that the DoD and the Services classify the deaths of Service Members in a number of categories--such as hostile action, accident, and so forth. The GAO found that only the Marine Corps identified deaths as being training related and even it did not include all deaths considered to be training-related. The GAO, therefore, manually reviewed data obtained from the DoD and each Service casualty and safety centers to identify training-related incidents and, with basic agreement from the Service surgeons general, developed and used the following definition for "training-related" circumstances to extract information from the various databases:

A death that results from a peacetime military exercise or training activity that is designed to develop a Military member's physical ability, maintain or increase individual or collective tactical skills, or maintain or increase a member's proficiency in a specific activity or environment--occurring after the training event, but where the exercise or activity was a contributing factor.

The GAO concluded the Services had classified several deaths that were training-related as resulting from natural causes. The GAO indicated they were primarily cardiac arrests that occurred during or shortly after the Service members had performed required physical training exercises. The GAO pointed out that DoD Instruction 6055.7, governing mishap investigation and reporting, does not require deaths from natural causes unrelated to the work environment to be investigated as a mishap. The GAO asserted that, inasmuch as the Services are classifying such deaths as being due to natural causes rather than training--in turn, they are not investigating them.

The GAO stressed that each Service surgeon general is of the opinion cardiac arrest cases should be treated as accidental and investigated to determine whether physical training was a contributing cause. The GAO observed that approach would allow the safety centers to identify and monitor potentially dangerous physical training practices and procedures so they can take appropriate actions where necessary. (pp. 6-8/GAO Draft Report)

DOD RESPONSE: Partially concur. The DoD acknowledges that the Military Services have had problems in the past concerning the types of investigations conducted. The Services have, however, taken action to ensure that the investigations are undertaken in compliance with established

Now on pp. 4-5.

Page 3 of 10

Appendix I
Comments From the Department of Defense

DoD policies and procedures. In addition, as discussed in the DoD response to Recommendations 1 and 2, the DoD is currently updating its accident reporting and investigation instruction to expand the guidance concerning deaths that occur during training. That update should be complete by the end of 1994.

The DoD does not agree that The Military Services do not identify and investigate all training-related deaths. All Service member deaths are identified and investigated based on a variety of DoD processes. Service member deaths are identified and investigated based on established DoD definitions and processes that have been thoroughly considered from both a logical and legal perspective. In that regard, the DoD defines certain deaths as attributable to natural causes, regardless of when or where they occur, and does not classify such deaths as accidents.

The GAO developed its own definition of training-related death and applied that definition to the cases sampled. Contrary to the GAO statement, the Service Surgeons General did not unanimously endorse the GAO definition--in fact, the Air Force formally advised the GAO staff of its non-concurrence. Based on a review of the "natural cause" examples cited by the GAO, it remains questionable whether many of those cases should be classified as training related.

In general, safety officials review every Military death (except those caused by combat or those medically attended) to determine reportability. Additionally, a legal or criminal investigation of some sort is required.

- o **FINDING D: Required Safety and Legal Investigations of Fatal Aviation and Non-Aviation Training Mishaps Not Always Conducted.** The GAO found that, although required by the DoD, the Military Services had not conducted safety and legal investigations for the 38 mishaps it sampled. The GAO further found that the Services had conducted safety investigations of only nine of the 19 fatal non-aviation training mishaps reviewed. The GAO observed that the Army and the Air Force conducted safety investigations on all such mishaps--six for the Army and three for the Air Force. The GAO pointed out that the ten mishaps that did not receive a safety investigation included five from the Marine Corps and five from the Navy.

The GAO explained that, at the time the mishaps occurred, Marine Corps regulations did not incorporate the DoD requirement that safety investigations be conducted for all fatal non-aviation training mishaps. The GAO pointed out that the Marine Corps had since revised its regulations and now requires investigations of such mishaps. The GAO

Page 4 of 10

See comment 2.

Appendix I
Comments From the Department of Defense

further pointed out that, although Navy regulations required safety investigations of non-aviation deaths, Navy officials acknowledged that they had not always been conducting such investigations. The GAO reported that, according to Navy officials, the requirement is now being enforced--and all future non-aviation deaths would be subject to a safety investigation.

The GAO also found that, at the time of its review, the Military Services were not conducting legal investigations of all aviation and non-aviation training fatalities. The GAO reported that the Services had conducted legal investigations on only 12 of the 19 non-aviation mishaps and 16 of the 19 aviation mishaps in its sample. The GAO observed the seven mishaps that were not investigated included three from the Air Force, three from the Marine Corps, and one from the Army. The GAO pointed out that the three aviation mishaps that did not receive legal investigations were all from the Army.

- Air Force--The GAO indicated that, according to Air Force officials, they were not aware of the DoD requirement and had not incorporated it into their regulations.
- Navy--The GAO noted Navy officials indicated that, although regulations required legal investigations, three of the non-aviation training fatalities were not investigated because the deaths were seen as resulting either from known medical problems or natural causes.
- Army--The GAO found that the Army did not have any record of whether legal investigations were conducted on some of its aviation and non-aviation training fatalities. The GAO reported that Army legal officials did not know whether legal investigations were ever performed on those deaths, since such investigations are performed and retained at the local installation level with no centralized reporting. The GAO pointed out that, although one of the aviation mishaps involved a night vision training mission, Army officials cited the fact that the mishap occurred in a combat zone (during OPERATION DESERT SHIELD) as the reason it did not conduct a legal investigation. The GAO concluded, however, that Army regulations governing legal investigations did not cite combat zone location as an exemption to the requirement to conduct a legal investigation. (pp. 8-10/GAO Draft Report)

DOD RESPONSE: Partially concur. Again, much of the finding is based on differing interpretations of what the DoD policies require and the GAO definition of what constitutes a "training death accident." The key DoD guidance does not consider "natural cause" deaths to be accidents. The GAO

Now on pp. 5-7.

Page 5 of 10

Appendix I
Comments From the Department of Defense

however, considered certain natural cause deaths to be accidents and measured those cases against the GAO "requirement."

See comment 3.

The GAO also used selective sampling methods. Thirty-two cases were randomly selected, and six chosen because of some prior knowledge of the circumstances. The random cases should have been analyzed separately from the targeted cases to give the overall analysis statistical impartiality. Grouping the random with the targeted cases provides at least the appearance of inserting statistical bias into the analysis.

The GAO use of a newly created definition, coupled with selective sampling, and co-mingling legal and safety investigations in the analysis clouds the singularly important question of how well the DoD is doing in using safety investigations to further improve the safety of DoD training. That question is not clearly answered by the GAO report.

With regard to "legal" investigations, the DoD has given broad latitude to the Services to interpret and implement such investigations. The reason the DoD added the requirement for some sort of legal investigation in its accident investigation instruction was to assure that some source of releasable information was available for whatever purpose outside of the accident investigation. The requirement also helps ensure that accident investigations are used only for their intended purpose--that purpose being solely to improve safety. Admittedly, the GAO discovered that was not always the case in the Navy and the Marine Corps. Both the Navy and Marine Corps have taken actions to address the problem.

With regard to the specific details concerning the individual Services, the following comments are provided:

- Air Force--Regarding awareness of a requirement for a "specialized" legal investigation of every mishap fatality, the Air Force was correctly unaware, because the DoD had no such requirement. According to Air Force policy, formal legal investigations are conducted only for aviation, missile, nuclear and space mishaps--unlike the Navy investigations, which are conducted for every type of mishap fatality. In addition to conducting all required accident evaluations, the Air Force has conducted some type of legal investigation of every mishap fatality, thereby satisfying the DoD requirements.
- Navy--Although Navy regulations required safety investigations of non-aviation deaths, the

Page 6 of 10

Appendix I
Comments From the Department of Defense

investigations were not conducted by the Naval Safety Center. As of May 1991, the Naval Safety Center is now required to investigate on-duty deaths. Prior to that date, the Naval Safety Center was not required to investigate non-aviation mishap deaths. The Navy now investigates all deaths related to physical training, physical stress related, and physical readiness testing.

- o **FINDING E: Some Services Do Not Have Procedures to Ensure the Independence of Legal Investigations.** The GAO reported DoD Instruction 6055.7 recognizes that the independence of the investigators is important to ensure conclusions and recommendations will be impartial and credible. The GAO concluded, however, that DoD and Service regulations and procedures do not require that officials involved in the legal investigation (those who appoint investigators and those who conduct the investigations) be independent of the unit being investigated.

The GAO found that, for the 28 legal investigation reports it reviewed, the appointing officials were independent of the unit under investigation in only 12 cases (41 percent) and the investigators were from independent organizations in only 11 cases (38 percent). The GAO further found that, in one of the cases it reviewed, the Marine Corps Commandant concluded that "when a Marine is killed or injured while training, ... it should be obvious that the investigating officer cannot be a member of the organization being investigated nor should he be appointed by its commander." The GAO noted that, as a result, the Marine Corps conducted a second investigation. (p. 11/GAO Draft Report)

DOD RESPONSE: Partially concur. The GAO cited examples where investigators and appointing officials were not fully independent of the unit under investigation. The current DoD requirement is for "a disinterested third party whenever possible." Although individual legal investigators may not always be fully independent of the unit where a training accident occurred, the review and approval process used by the Services provides adequate independence of legal investigations to ensure impartial and credible conclusions and recommendations.

- o **FINDING F: Services Lack Systems to Track Recommendations Made in Legal Investigations.** The GAO reported that, despite the DoD requirement the Services establish a system to identify problem areas and ensure corrective actions are monitored until completion, none of the Services had a system for capturing and monitoring recommendations made in legal investigation reports. The GAO pointed out that the 28 legal investigation reports it reviewed made a total of

Now on pp. 8-9.

Appendix I
Comments From the Department of Defense

120 recommendations. The GAO asserted that, because there was no formal tracking procedure, a determination could not be made whether all of those report recommendations had been resolved.

The GAO observed that, according to Service officials, individual command units experiencing training mishaps are responsible for ensuring that recommended corrective actions are acted upon. The GAO attempted to contact officials at some of the units responsible for the investigations to determine the status of the corrective actions. The GAO found, however, that in most cases, the officials directly involved with the mishap investigations had since left the units--and that the remaining officials had no formal procedure for either implementing or monitoring corrective actions identified in legal investigation reports. The GAO also found that none of the units maintained records of whether appropriate actions were taken as a result of the investigative recommendations. (pp. 12-13/GAO Draft Report)

DOD RESPONSE: Concur. Extensive systems are already in place to monitor recommendations and corrective actions contained in safety investigation reports. All recommendations are thoroughly reviewed by professionals to ensure that they will be effective in reducing the risk of future accidents. There is no need for a separate system to monitor legal recommendations, which address issues such as liability or adverse personnel actions.

Now on p. 9.

Appendix I
Comments From the Department of Defense

* * * * *

RECOMMENDATIONS

- o **RECOMMENDATION 1:** The GAO recommended that the Secretary of Defense formally define what constitutes a "training-related" death and include, in that definition, deaths due to natural causes that occur in or shortly after a training activity. (p. 13/GAO Draft Report)

Now on p. 10.

DOD RESPONSE: Concur. The DoD will create a definition of "training-related" death, and include that definition in its update of DoD Instruction 6055.7, "Mishap Investigation, Reporting, and Recordkeeping." Estimated completion date is the fourth quarter of CY 1994.

- o **RECOMMENDATION 2:** The GAO recommended that the Secretary of Defense direct the Services to amend their regulations to include the common definition for training-related death and require that all training-related deaths be investigated. (p. 13/GAO Draft Report)

Now on p. 10.

DOD RESPONSE: Concur. The revised DoD Instruction 6055.7 will require the Services to amend their implementing regulations to include the common definition for training-related death and require that all training-related deaths be investigated. When the DoD instruction is changed, the Services must amend their regulations within 120 days.

- o **RECOMMENDATION 3:** The GAO recommended that the Secretary of Defense direct the Services to enforce the DoD requirement to conduct safety and legal investigations on all training-related deaths, both aviation and non-aviation. (p. 14/GAO Draft Report)

Now on p. 10.

DOD RESPONSE: Partially concur. The DoD will direct the Services to ensure that all required investigations are conducted. However, there is currently no blanket DoD requirement for a "safety" investigation of all training related deaths. The requirements are for "safety" investigations of accidental deaths. The requirement excludes circumstances such as homicides, suicides, and natural causes. That same requirement will be included in the update of DoD Instruction 6055.7. Estimated completion date is the fourth quarter of CY 1994.

With regard to the "legal" investigation, existing legal processes are adequate and are being followed. A variety of "legal" investigations are currently employed, also depending on the circumstances. No death goes unnoticed or

Page 9 of 10

Appendix I
Comments From the Department of Defense

uninvestigated. The requirement cited by the GAO applies to accidental deaths, not the natural cause deaths which the DoD had excluded from the definition of an accident.

- o **RECOMMENDATION 4:** The GAO recommended that the Secretary of Defense direct the Services to ensure the independence of legal investigations by requiring that (1) the convening authority come from a higher level than the unit that experienced the mishap and (2) the senior investigative member also be independent of that unit. (p. 14/GAO Draft Report)

DOD RESPONSE: Nonconcur. As discussed in the DoD response to Finding E, the GAO report cited examples where legal investigators and appointing officials were not fully independent of the unit under investigation. The current DoD requirement is for "a disinterested third party whenever possible." Although individual legal investigators may not always be fully independent of the unit where a training accident occurred, the review and approval process used by the Services ensures adequate independence of legal investigations.

- o **RECOMMENDATION 5:** The GAO recommended that the Secretary of Defense direct the Services to establish systems to track recommendations made in legal investigative reports to ensure that appropriate actions have been taken. (p. 14/GAO Draft Report)

DOD RESPONSE: Nonconcur. Legal investigations are not primarily accident prevention instruments, but often address issues such as discipline and liability. Legal investigations are no longer used within the DoD as substitutes for safety investigations. The DoD will use existing safety tracking systems to assure that recommendations are evaluated by trained accident prevention professionals, and implemented when appropriate.

Page 10 of 10

The following are GAO's comments on the Department of Defense's letter dated February 2, 1994.

GAO Comments

1. We modified the text that now presents the official definition.
2. We modified the text to reflect the fact that while the surgeons general from all three services agreed that a definition of training-related death should be developed, the Air Force surgeon general did not concur with the definition we used.
3. We explicitly stated that our sample was non-projectable. We have not subjected our sample cases to any statistical analyses that could be affected by the way in which the cases were selected.

Major Contributors to This Report

**National Security and
International Affairs
Division, Washington,
D.C.**

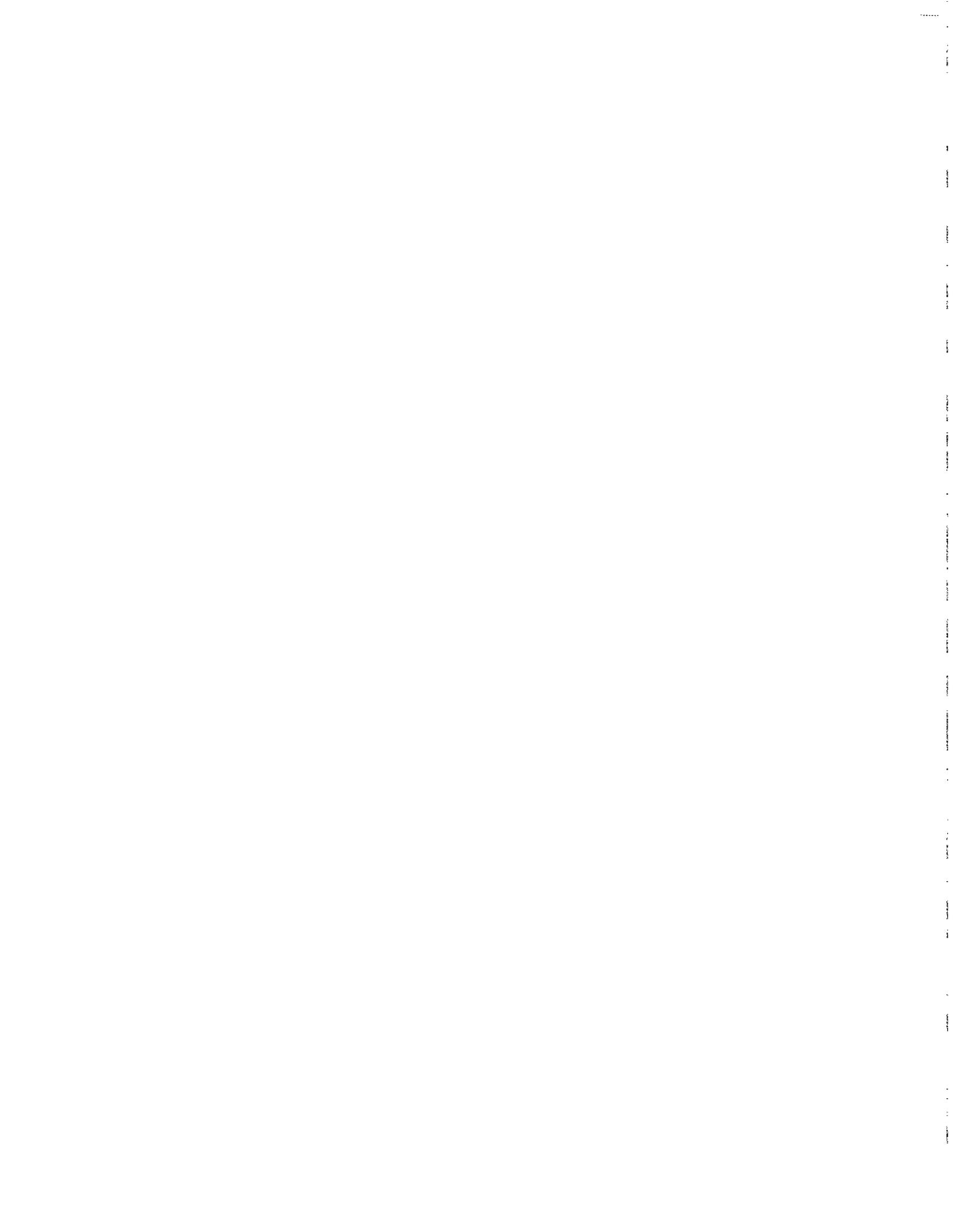
Norman J. Rabkin, Associate Director
William E. Beusse, Assistant Director

**Atlanta Regional
Office**

Alphonse Davis, Regional Management Representative
James H. Woods, Evaluator-in-Charge
Jyoti Gupta, Site Senior
Amy S. Parrish, Evaluator
Pamela A. Scott, Reports Analyst

**Denver Regional
Office**

Robert E. Kigerl, Regional Assignment Manager



Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

**U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20884-6015**

or visit:

**Room 1000
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC**

**Orders may also be placed by calling (202) 512-6000
or by using fax number (301) 258-4066.**

